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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,221

08/08/2005

Kazuya Odagiri

450100-04624

2429

7590

06/27/2006

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EXAMINER

ALAM, FAYYAZ

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/517,221

Applicant(s)

ODAGIRI ET AL.

Examiner

Fayyaz Alam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/8/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8 - 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8 - 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/8/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement submitted on 12/08/2004 been considered by the Examiner and made of record in the application file.

### *Preliminary Amendment*

3. The present Office Action is based upon the original patent application filed on 8/8/2005 as modified by the preliminary amendment filed on 8/8/2005. **Claims 8 - 10** are now pending in the present application.

### *Specification*

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Dual Antenna Communication System with Power Control.**

***Claim Objections***

5. **Claim 10** is objected to because of the following informalities: replace "reception" with "transmission" on line 5. Appropriate correction is required. For the purpose of examining this correction will be considered valid and prior art will be applied accordingly.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 8 - 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lumelsky (U.S. Patent # 6,885,847)** in view of **Thompson et al. (U.S. Patent # 5,812,093)** and further in view **Yoshizawa (U.S. Patent # 7,039,445)**.

Consider **claim 8**, Lumelsky discloses a communication apparatus (figure 6) which performs wireless communication (figure 6 discloses antennas) with another communication device existing in the neighborhood (see claim 38 where a wireless Bluetooth radio (602) is disclosed which inherently suggests communication in the "neighborhood". Also see IEEE transactions on 802.15 and Bluetooth WPAN communications.), comprising:

Bluetooth radio (602) (read as transmission processing means) for processing a transmission signal (The examiner is aware that a Bluetooth radio is disclosed but a radio inherently consists of a transmission and reception means);

Directional antenna (661) (read as first antenna) and omnidirectional antenna (660) (read as second antenna) to which an output of said Bluetooth radio (602) (read as transmission processing means) is supplied through an RF switch (621) (read as selectively supplied; see figure 6).

In addition, Lumelsky clearly discloses said directional antenna (661) (read as first antenna; see column 11, lines 57 - 62) is used for all transmissions between EP and AP devices (read as other cases than that; see column 11, lines 40 - 48).

The invention as disclosed by Lumelsky fails to show, that second antenna is formed of a signal line terminated in an impedance on the ground and the sensitivity thereof is made lower than that of said first antenna.

In the related field of endeavor, Thompson et al., clearly disclose a helical radiating element (302) (read as second antenna) is formed of a signal line terminated in an impedance on the ground (see figure 8 and column 6, lines 48 - 63) and sensitivity thereof is made lower than that of said directional antenna (661) (read as first antenna).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the teachings of Thompson et al. with that of Lumelsky since the practice of grounding an antenna in order to increase impedance and as a result reducing the sensitivity is well-known in the art for the purpose of reduction in transmitting and receiving power.

In addition, Lumelsky and Thompson et al. fail to disclose output power control means for making the output of said transmission processing means output from said first antenna or from said second antenna when a search signal to search for other communication devices is transmitted from said transmission processing means, in which said second antenna is used to transmit the output in a predetermined state and said first antenna is used in other cases than that.

In the related field of endeavor, Yoshizawa discloses a control information setting section (20b) (read as output power control means; see column 4, lines 56 - 65) for making the output of transmission data processing (22) (read as transmission processing means) output from antenna (25) (read as second antenna) when a station finding message (read as search signal) to find other stations (read as search for other communication devices) is used to transmit the output in predetermined intervals (read as predetermined state; see column 5, lines 40 - 48).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the teachings of Yoshizawa with that of Lumelsky and Thompson et al. in order to provide transmission power control for periods of time when searching for other communication devices and for data communications.

Consider **claim 9**, in view of claim 8, Lumelsky as modified by Thompson et al. and Yoshizawa disclose a control module (610) (read as output power control means; see figure 6) performs control to make omnidirectional antenna (660) (read as second antenna) perform transmission output (see figure 6), further a power ratio (read as gain; column 12, lines 38 - 47) of the power amplifier (622) (read as transmission amplifier) in said transmission processing means is made lower (see figure 6 and column 12, lines 38 - 47).

Consider **claim 10**, in view of claim 9, Lumelsky as modified by Thompson et al. and Yoshizawa disclose that directional (661) (read as first) and omnidirectional (660) (read as second) antennas are also connected to Bluetooth radio (602) (read as reception processing means; see figure 6) (The examiner is aware that a Bluetooth

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radio is disclosed but a radio inherently consists of a transmission and reception means), and a signal which is received by said directional (661) (read as first) and omnidirectional (660) (read as second) antennas and which is supplied through an RF switch (621) (read as selectively supplied) to the Bluetooth radio (602) (read as reception processing means and transmission processing means) (see figure 6).

### ***Conclusion***

6. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1101. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone



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number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Fayyaz Alam*

June 6, 2006

  
RAFAEL PEREZ-GUTIERREZ  
PRIMARY EXAMINER  
6/20/06